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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/648,212

08/27/2003

Florian Hoche

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4311

7590

08/24/2005

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EXAMINER

SAN MARTIN, EDGARDO

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/648,212

**Applicant(s)**

HOICHE ET AL.

**Examiner**

Edgardo San Martin

**Art Unit**

2837

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-21 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter described in claim 20, including all the limitations of claims 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "said partition wall" in Line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 is unclear as to what it refers to. For purpose of art rejection it would be interpreted as "wherein the inlet opens into the attenuating space as a diaphragm".

***Claim Objections***

3. Claims 20 and 21 are objected to because of the following informalities:
  - Claim number 20 is repeated; the second occurrence of the claim number 20 will be considered as 21.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 3, 6 - 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasui et al. (US 4,132,286).

With respect to Claim 1, Hasui et al. teach a muffler for an internal combustion engine comprising a muffler housing having an inlet opening (Fig.7, Item 116) and an outlet (Fig.7, Item 122); the muffler housing including an attenuating space (Fig.8, Item 131) formed therein; a resonance pipe (Fig.7, Item 117) fluidly connected to the inlet opening; and the muffler housing including an upper half shell (Fig.7, Item 111) and a lower half shell (Fig.7, Item 111a) and the half shells at least partially delimiting the resonance pipe (Fig.8).

With respect to Claims 2 and 3, Hasui et al. teach wherein a partition wall (Fig.7, Item 115) is mounted between the half shells; and wherein the partition wall delimits the resonance pipe (Figs.7 and 8).

With respect to Claims 6 and 7, Hasui et al. teach wherein the upper and lower half shells conjointly define the muffler housing (Figs.7 and 8); and wherein the lower half shell includes the inlet opening (Fig.7, Item 112a) and the outlet is formed in the lower half shell (Fig.7, Item 113a).

With respect to Claim 8, Hasui et al. teach wherein the housing has attachment element (Fig.7, Item 114) and the upper half shell, the lower half shell and the partition wall are connected seal tight to each other in the region of the attachment element (Figs.7 and 8).

With respect to claim 9, Hasui et al. teach wherein the end of a resonance pipe (Fig.5, Item 75) facing away from the inlet opening (Fig.5, Item 72) is configured to be closed (Fig.5, Item 91).

With respect to claims 10 and 11, Hasui et al. teach wherein the inlet opens into the attenuating space as a diaphragm (Fig.7, Item 130), and wherein the diaphragm (Fig.7, Item 130) is configured in the partition wall (Fig.7, Item 115) and establishes a connection between the attenuating space (Fig.8, Item 131) and the inlet opening (Figs.7 and 8, Item 116; Col.6, Lines 8 - 17).

With respect to claim 12, Hasui et al. teach wherein a diaphragm (Fig.7, Item 121) is configured in one of the half shells (Fig.7, Item 111) and establishes a connection between the end of the resonance pipe (Fig.7, Item 117) facing away from the inlet opening and the attenuating space (Fig.8, Item 131).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasui et al. (US 4,132,286).

Hasui et al. teach the limitations discussed in a previous rejection, but fail to disclose the subject matter described in claims 13 – 21.

The Examiner takes Official Notice that it is well known in the art of acoustics, in particular, muffler design, to tune the muffler based on the engine performance and/or properties in order to make possible the sound muffling effect. The Examiner considers that it would have been an obvious matter of design choice to provide the muffler with the characteristic described in claims 13 – 19, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233; furthermore, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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With respect to claim 20, the Examiner takes Official Notice that it is well known in the art of muffling design to employ a catalytic converter within the muffler, in order to produce a cleaner gas exhaust.

With respect to claim 21, Hasui et al. teach wherein the resonance pipe is one of a plurality of resonance pipes (Figs. 9 and 10); it is well known in the art of acoustics to employ a switching element, such as a valve, to switch in and out of at least one of the resonance pipes.

### ***Allowable Subject Matter***

6. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. The attached hereto PTO Form 892 lists prior art made of record that the Examiner considered it pertinent to applicant's disclosure.



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**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571) 272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edgardo San Martin  
Primary Examiner  
Art Unit 2837  
Class 181  
August 22, 2005